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| Supplementary Table 4. Effect of *SIFa* mutations and RNAi-mediated knockdown on rest:activity rhythms | | | | | |
| Rest:Activity Rhythms – Mutants | | | | | |
| Genotype | N | % Arrhythmic | Period ± 95% CI | Power ± 95% CI | Power T-test |
| *SIFa1* | 45 | 11.11 | 23.94 ± 0.12 (n=40) | 577.0 ± 114.1 | T(84.52) = -11.78, *p* =**<0.0001** |
| *SIFa1*/+ | 47 | 0 | 23.81 ± 0.04 | 1717.2 ± 151.6 |
| *SIFa2* | 46 | 2.17 | 23.66 ± 0.10 (n=45) | 703.6 ± 134.5 | T(91.59) = -7.083, *p* =**<0.0001** |
| *SIFa2*/+ | 48 | 0 | 23.68 ± 0.06 | 1423.9 ± 147.1 |
| Rest:Activity Rhythms – Genetic Rescue | | | | | |
| Genotype | N | % Arrhythmic | Period ± 95% CI | Power ± 95% CI | Power ANOVA and Tukey HSD Tests |
| *SIFa1*/+ | 60 | 0 | 23.90 ± 0.05 | 1724.1 ± 146.2 | ANOVA: F(3,230) = 41.05, *p* =**<0.0001**  Tukey HSD *p*-values:  SIFa1/+ : SIFa2/+ = **0.0393**  SIFa1/+ : *Rescue* = **0.0026**  SIFa1/+ : SIFa1/SIFa2 = **<0.0001**  SIFa2/+ : *Rescue* = **<0.0001**  SIFa2/+ : SIFa1/SIFa2 = **<0.0001**  SIFa1/SIFa2 : *Rescue* = **<0.0001** |
| *SIFa2*/+ | 61 | 0 | 23.83 ± 0.07 | 1446.9 ± 143.7 |
| *SIFa2*/*SIFa1;gSIFa*/+ | 56 | 0 | 23.89 ± 0.05 | 2099.1 ± 164.6 |
| *SIFa1*/*SIFa2* | 57 | 0 | 23.80 ± 0.10 | 949.8 ± 127.1 |
| Rest:Activity Rhythms – RNAi | | | | | |
| Genotype | N | % Arrhythmic | Period ± 95% CI | Power ± 95% CI | Power ANOVA and Tukey HSD Tests |
| *Elav-GAL4;*UAS-*Dicer* >+ | 59 | 0 | 23.53 ± 0.11 | 560.2 ± 76.0 | ANOVA: F(4,254) = 37.11, *p* =**<0.0001**  Tukey HSD *p*-values:  *Elav;Dicer>+* : +>*SIFa* RNAi1 = **<0.0001**  *Elav;Dicer>+* : +>*SIFa* RNAi2 = **<0.0001**  *Elav;Dicer>+* : *Elav;Dicer* >*SIFa* RNAi1 = **<0.0001**  *Elav;Dicer>+* : *Elav;Dicer* >*SIFa* RNAi2 = **<0.0001**  *+>SIFa RNAi1* : *Elav;Dicer* >*SIFa RNAi1* = **<0.0001**  *+>SIFa* RNAi2: *Elav;Dicer* >*SIFa* RNAi2 = **<0.0001** |
| *+>*UAS-*SIFa* RNAi1 | 59 | 0 | 23.4 ± 0.28 | 850.0± 112.7 |
| *Elav;Dicer >SIFa* RNAi1 | 56 | 19.64 | 23.5 ± 0.55 (n=46) | 236.5 ± 49.6 |
| *+>*UAS-*SIFa* RNAi*2* | 59 | 0 | 23.8 ± 0.08 | 698.7 ± 99.1 |
| *Elav;Dicer >SIFa RNAi2* | 25 | 44 | 24.3 ± 1.2 (n=14) | 155.1 ± 45.7 |